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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/652,755	08/29/2003	David A. Tatham	9858-000359	1746

7590 02/08/2005

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EXAMINER

PASCHALL, MARK H

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/652,755	TATHAM, DAVID A.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Mark H Paschall	3742	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on papers filed 11-30-04.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-23 is/are allowed.
- 6) ☒ Claim(s) 1,4-9, 12-16,19,20 is/are rejected.
- 7) ☒ Claim(s) 2,3,10,11,17 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,4-9,12-16,19-20,24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luo et al in view of Couch, Jr. et al. the claims are rejected for the same reasons set forth in paragraph 3 in the previous rejection.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Luo et al. the claims are rejected for the same reasons set forth in paragraph 4 in the previous rejection.

### ***Response to Arguments***

Applicant's arguments filed 11-16-04 have been fully considered but they are not persuasive. On page 9 in the response, Applicant advance that the instant invention controls the gas pressure within the gas conduit and that conversely the prior art controls the gas flow, and not the gas pressure as claimed. One of ordinary skill in the art is aware that the gas flow is directly related to the gas pressure, and vice versa. Very simply, a higher gas flow relates to a higher pressure. Numerous times in the Luo et al patent it is mentioned that the gas flow is indicative of the gas pressure. In column 8

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lines 28-32 LUO al mention that , “the gas flow and pressure in chamber 30, which decay in a generally exponential manner...” In column 7 lines 23-25, luo mention that, “an operator sets a desired gas flow or pressure”. The artisan would have found it well within the level of ordinary skill in the art to sense either parameter and also use that as an indication of the other. Applicants own specification on page 10 states that, “the gas pressure and gas flow drop initially as shown and the rise to their stabilized values”. Figure 5 in the instant application depicts flow and pressure together on a graph of the gas control. Clearly, applicant can see that luo et al would control the pressure indirectly by controlling the gas flow as claimed. Luo et al as modified would act to control the gas pressure within the conduit by controlling the gas flow within the conduit. AS set forth in the rejection, luo et al is modified by couch, Jr. et al since Couch Jr. et al teach use of bypass solenoids S2 , S5, S7, to stabilize the gas flow and hence the gas pressure during arc transfer, as claimed.

As per; claim 5 it is considered an obvious choice to use suck control in the primary and secondary flows.

### ***Allowable Subject Matter***

Claims 2,3,10,11,17,18 are objected on a rejected base claim and would be allowable if written in independent form including all of the limitations of the base claim and any intervening claims. Claims 21-23 are allowable for setting forth a method of operating the solenoids in the plasma system, not taught in the prior art of record.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark H Paschall whose telephone number is 703 308-1642. The examiner can normally be reached on 7am - 3pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (703) 305-5766. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Mark H Paschall  
Primary Examiner  
Art Unit 3742

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